A Sketch of an Analysis and Notation applicable to the Estimation of the Value of Life Contingencies. By Benjamin Gompertz, *Esq. F.R.S.* Read June 29, 1820. [*Phil. Trans.* 1820, *p.* 214.]

Mr. Gompertz begins by establishing a system of notation intended to avoid unnecessary repetitions and circumlocution, and proceeds to apply his abbreviated expressions to a more accurate determination of the value of a number of joint lives, according to any given tables of mortality, than can be obtained by the common approximations. He afterwards investigates the probabilities of the survivorship of two persons of different ages, who were known only to be living at one time and dead at another, which, within certain limits, are supposed to be equal: and he inquires into the conditions of mortality that would be requisite in order that this proposition should be accurately true. He then applies his method to the problems which have been solved by Mr. Morgan in the Philosophical Transactions, and copied by Mr. Baily in his work on Assurances, relating to some complicated contingencies and survivorships on different suppositions respecting the decrement of life, employing various integrations, summations, and approximations in this elaborate inquiry, but without obtaining any results which it is possible to specify in an abstract, as giving a general idea of the nature of his improvements, without entering into forms of expression directed almost as much to the eye as to the understanding.

On the Measurement of Snowdon, by the Thermometrical Barometer. By the Rev. F. J. H. Wollaston, *B.D. F.R.S.* Read June 29, 1820. [*Phil. Trans.* 1820, *p.* 295.]

After adverting to the statements contained in his former paper upon the use of the above-mentioned instrument, and giving certain tables requisite for determining the necessary corrections arising out of the want of uniformity in the variations of the boiling temperature of water at certain elevations, the author details the means which he resorted to for estimating the height of Snowdon by this instrument, and compares his results with the trigonometrical and barometrical measurement of General Roy.

The height, as obtained by the thermometric barometer, properly corrected from the north end of Carnarvon Quay to the summit, is 3546·25 feet. General Roy's trigonometrical measurement gives 3555·4 feet, and barometrically 3548·9 feet. During this visit to Carnarvon, the author also took the opportunity of ascertaining, by the same means, the height of Moel Elio, also measured by General Roy. He makes it 2350·55 feet, while General Roy's trigonometrical measurement gives 2371 feet, and the barometer 2391·8 feet. This discordance, the author thinks, may be referred to the indeterminate form of Moel Elio rendering the point of observation less definite.

Archdeacon Wollaston concludes this paper with a description of some improvements in the construction of this instrument.